REMARKS

Claims 1-25 are now pending in the subject application, with claims 21-24 being withdrawn from consideration.

I. Rejection of claims 1-19 and 25 under 35 U.S.C. § 103(a)

The Examiner maintained his rejections of claims 1-19 and 25 under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,869,948 to Bock et al. ("Bock") in view of U.S. Patent Application No. 2004/0204413 to Faour et al. ("Faour" for the reasons set forth in the office action. In particular, the Examiner states that "Bock is directed to oral meloxicam compositions. A granule is disclosed in Example 7. The meloxicam granules comprise meloxicam, sodium citrate, lactose (carrier) (see instant claims 1 and 13-16), polyvinylpyrrolidone (povidone; a binder) (see instant claims 1, 3 and 4)." The Examiner further states that "the meloxicam may be a sodium or meglumine salt (see claim 1; see instant claims 1 and 2). The ratio between meglumine and meloxicam is taught to be from 1.2:1 to 1:1.2 (see instant claims 19 and 19). The concentration of meloxicam in the granules is about 3.5% by weight (see Example 7; see instant claim 17)." The Examiner concedes that "Bock fails to teach 5g of their meloxicam granules as being capable of dissolving in 100 mL of demineralized water." The Examiner further notes that the excipients polyvinylpyrrolidone, silicon dioxide and microcrystalline cellulose "may be water-insoluble." However, the Examiner takes the position that that the excipients polyvinylpyrrolidone, silicon dioxide and microcrystalline cellulose are hydrophilic. The Examiner asserts that "while they may not be dissolved by water, they would surely disperse in the aqueous environment and favorably interact with water molecules." Applicants traverse.

As a preliminary matter, Applicants note that claims 1-19 and 25 of the subject application are directed to water soluble meloxicam granules comprising meloxicam, a salt forming agent, a binder, a sugar or a sweetener, and a carrier, and optionally a flavoring agent and/or other excipients.

Applicants submit that Bock relates to granules that form a dispersion in aqueous medium. The meloxicam contained in granules of Bock may be capable of dissolving in an aqueous medium; however, Bock's granules contain additional components that do not

dissolve in water. Thus, the granule of Bock cannot completely dissolve in aqueous medium to form a solution for the reasons discussed below.

It appears that the Examiner recognizes the solubility difference between the granules of the present invention and the granules of Bock. For example, the Examiner states that "while [the granules of Bock] may not be dissolved by water, they would surely disperse in the aqueous environment and favorably interact with water molecules." Therefore, Applicants are confused by the Examiner's statements "that the granules of Bock possess similar dissolution properties as that instantly claimed as the formulas are sufficiently alike in make up" and "the granules of Bock possess similar dissolution properties as that instantly claimed as the formulas are sufficiently alike in make up. See MPEP 2112.01."

In the Amendment filed on May 11, 2009 ("the May 11 Amendment"), Applicants noted that Bock relates to a rapidly decomposing tablet containing *inter alia* meloxicam in the form of a salt with an inorganic base (see Abstract of Bock). Applicants further noted that "even if the granulated powders described in Bock (US) 'breakdown' or 'decompose,' there is no teaching or suggestion that such granules would be water soluble as recited in the claims of the subject application." Included in the May 11 Amendment was a Declaration by Dr. Martin Folger dated May 5, 2009 ("the Folger Declaration") which is incorporated by reference in its entirety. The Folger Declaration stated in Paragraph 14 that "the data depicted in Figure 4 [of Bock] refers to the plasma concentration, which is indicative of the amount of dissolved meloxicam. However, the plasma concentration data depicted in Figure 4 provides no indication that the all of the components of the granule dissolved, including excipients." The Folger Declaration further stated in Paragraph 15 that "the granulated capsule composition described by Bock in Example 7 contains cross-linked polyvinylpyrrolidone, silicon dioxide and microcrystalline cellulose. Each of these ingredients is <u>insoluble in water including water based compositions encountered *in vivo*</u>." (Emphasis added.)

This deficiency of Bock is not further overcome in view of Faour. The Examiner relies on Faour for its description of a granule containing a flavorant or sweetener. However, as explained in the Folger Declaration stated in Paragraph 15, "including a sweetener or sugar into the granulated composition of Bock would have little effect on the

solubility of the cross-linked polyvinylpyrrolidone, silicon dioxide and microcrystalline cellulose."

According to MPEP 2112.01, "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." (Emphasis added.) MPEP 2112.01 further states that "the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily posses the characteristics of the claimed product." (Emphasis in original.)

As stated by Applicants and recognized by the Examiner, Bock's granules form a dispersion, whereas the granules of the present invention form a solution. Thus, even if the meloxicam contained in granules of Bock may be capable of dissolving in an aqueous medium, the dispersion-forming granules of Bock are not substantially identical to the water-soluble granules recited in the claims of the subject application, because the Bock granules do not possess the solution-forming characteristic of the presently claimed granules. Inclusion of a flavorant or sweetener as taught by Faour into Bock's granules will not cause the resultant granules to dissolve in aqueous medium to form a solution.

In view of the above, Applicants respectfully submit that claims 1-19 and 25 are not obvious over Bock in view of Faour and request that the rejection of claims 1-19 and 25 under 35 U.S.C. § 103(a) be withdrawn.

II. Rejection of claim 20 under 35 U.S.C. § 103(a)

The Examiner maintained the rejection of claim 20 under 35 U.S.C. § 103(a) as allegedly being obvious over the Bock, in view of Faour, and further in view of Parikh, The Handbook of Pharmaceutical Granulation Technology, 1st Ed., 1997, Marcel Dekker, pp. 60-72 ("Parikh"), for the reasons set forth in the Office Action. The Examiner states that "Bock fails to teach a composition which comprises meloxicam, meglumine, hydroxypropylmethylcellulose, povidone, and glucose monohydrate (dextrose." The Examiner further states that "Faour teaches that the carrier for their granular composition may be lactose or dextrose. Faour also teaches that the binder for the granular composition can be povidone (see [0076] and [0077])." The Examiner still further states that Parikh is drawn to a variety of binders to be used in granulating granules. It is taught that binders are provided to provide a cohesive force to the granules. Binders include natural and

synthetic binders such as povidone and hydroxypropyl methylcellulose (HPMC)." The Examiner contends that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bock, Faour, and Parikh with a reasonable expectation of success in arriving at a water soluble granule composition comprising meloxicam, meglumine, HPMC, povidone and glucose monohydrate."

Applicants traverse. Claim 20 of the subject application is directed to water soluble meloxicam granules comprising meloxicam, meglumine, hydroxypropylmethylcellulose (HPMC), povidone, and glucose monohydrate. As discussed above, the granules described in Bock form a dispersion, because not all of the excipients in Bock's granules (e.g., silicon dioxide, microcrystalline cellulose) are water soluble. In other words, the Bock granules do not possess the solution-forming characteristic of the presently claimed granules. Such dispersion-forming characteristic of Bock's granules is not changed by including a flavorant or sweetener as taught by Faour or by including a water-soluble component such as HPMC. Moreover, one of skill in the art would not be motivated to replace the water-insoluble components of Bock (e.g., silicon dioxide, microcrystalline silicon) with a water-soluble component such as HPMC as taught by Parikh. As stated in the Folger Declaration states at Paragraph 19

> Nothing in Parikh suggests that these water-insoluble components [of Bock] should be replaced by water-soluble components. Thus, even if the granulated capsule of Bock was modified to include povidone and HPMC, nothing in Parikh suggests replacing the other water-insoluble components used in Bock's granules, i.e., silicon dioxide and microcrystalline cellulose.

The Examiner argues that HPMC is only slightly soluble in cold water and insoluble in hot water. The Examiner asserts that one of skill would be motivated to replace microcrystalline cellulose with HPMC, because both components are water-insoluble and hydrophilic. Applicants refer to the product brochure entitled Using METHOCEL Cellulose Ethers for Controlled Release of Drugs in Hydrophilic Matrix Systems," ("the METHOCEL brochure") and available at http://www.colorcon.com/literature/marketing/mr/Extended%20Release/METHOCEL/English/hydroph_matrix_broch.pdf, last visited on January 5, 2010. (A copy of the METHOCLE brochure is attached to the information disclosure statement filed

concurrently herewith.) The METHOCEL brochure indicates that HPMC is produced by Dow Chemical Company under the trademark METHOCEL (see, e.g., Exhibit 1, page 4). Exhibit A further states that "METHOCEL cellulose ethers are water-soluble polymers derived from cellulose, the most abundant polymer in nature" (see Exhibit 1, page 3, first paragraph in left column). (Emphasis added.) Thus, contrary to the Examiner's position, HPMC used in pharmaceutical preparations is water soluble – although perhaps not in hot water.

In summary, Bock in view of Faour would not lead to a water-soluble meloxicam granule for the reasons set forth in Section I above. Moreover, this deficiency of Bock in view Faour is not overcome further in view of Parikh for the reasons previously explained in the Folger Declaration and discussed above. Therefore, even if Parikh teaches a variety of binders to be used in granulating granules, the combination of Faour and Parikh would not provide any suggestion or motivation to modify the dispersion, forming granular composition of Bock in order to form a water-soluble granule.

In view of the above, Applicants respectfully submit that claim 20 is not obvious over Bock in view of Faour, and further in view of Parikh, and request that the rejection of claim 20 under 35 U.S.C. § 103(a) be withdrawn.

III. Rejoinder of claims 21-24

As discussed above, Applicants believe that claim 1 is now allowable. Accordingly, Applicants request the rejoinder of withdrawn process claims 21-24 which depend directly or indirectly upon claim 1. ("If applicant elects a claim(s) directed to a product which is subsequently found allowable, withdrawn process claims which depend from or otherwise require all the limitations of an allowable product claim will be considered for rejoinder"(see MPEP § 824.04(b))).

CONCLUSION

Applicants respectfully request prompt consideration of the pending claims and early allowance of the application. No additional fee is believed due. However, if any additional fee is due, the Examiner is authorized to charge the fee to Applicants' Deposit Account No. 02-2955.

If a telephonic or personal interview is deemed necessary to expedite the examination of the instant application, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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